DrumIt Five
OS 1.20

HIGHLIGHTS

- **Bank select**, choose kit bank file at startup.
- **Single kits**, use upto 999 single kits.
- **Song pitch**, practice at a lower speed.
- **Sound select**, choose any sound type within a dsnd file.
- **Loops**, play seamless continuous loops.
- **Equalizer**, 3 bands with mid sweep.
- **Flanger**, modulate the sound spectrum.
- **Split wave**, allows music and click to be routed separately.
- **Metronome tempo**, increased accuracy with one decimal.
- **Trigger crosstalk**, suppress stray triggers.
- **Cymbal triggers**, 2 new types and different gain function.
- **Hihat pedal**, new page with extra functionality.
- **Submix**, any combination of channels.
- **MIDI thru**, data in to data out.
- **Mixer view**, new configuration with 9 vertical faders.

All new features since OS 1.10 are explained in more detail in the sections below.
The last page gives an overview of all Kit and Unit pages available.
For a full description of all functions of DrumIt Five, please refer to the User Manual.

IMPORTANT

Update
To update DrumIt Five to OS 1.20, connect it with a USB cable to your computer, start in USB mode by holding down the left button above the LCD at startup, copy the DrumIt120.bin file to the root folder of the DrumIt Five drive, wait until write is finished and restart.

Beta version
If you have been using a beta version of OS 1.20, it has to be removed from the DrumIt drive otherwise the boot program loads it instead of the release version. It is also advised to use the DrumIt.dkit file you have copied before testing the beta version. Some settings saved with the beta version might not be compatible with the release version.

Backup
Please make a backup of the original DrumIt.dkit file. If you save UNIT or KIT settings with OS 1.20 they will be in 1.20 format which is not backward compatible with earlier OS versions.

Cymbal and hihat trigger
There are new cymbal trigger and hihat pedal functions. When updating to OS 1.20, these settings need to be adjusted. Refer to the description of the cymbal trigger and hihat pedal in the UNIT section below.

OVERVIEW

Bank select
When holding down the KIT button at startup, one can choose which kit bank file to open. Press PREV or NEXT to select a dkit file, then press OPEN. By default the DrumIt.dkit file is opened.

Single kits
One can now use single kit files in addition to the kit bank file. A single kit file, possibly bundled with new dsnd files, makes it very convenient to install new kits. Start DrumIt in USB mode, copy the dkit and dsnd files to the DrumIt drive, restart DrumIt and select the new kit which will appear after kit program 100. Refer to the single kit description in the KIT section for more details.

Loops
The DrumIt Five now supports loops. These are similar to normal dsnd files but contain extra information about the exact loop length. They can be selected on any channel just as normal drum sounds. With the KIT-ENV-SOUND setting one can select if they are played as continuous loops with start / stop or as one-shot loops with retrigger. There's also an option to play them at a fixed volume independent of the trigger level.

Pressing the channel button to trigger a loop sound will normally just play 1 second of the loop, this is a kind of preview to avoid the entire loop playing to the end. To start the loop with its full length, hold down the button 1/2 second. Once the loop is running (if continuous), a short press on the button selects the channel but does not start or stop it. Hold the button to stop the loop.

When making a loop, make sure to set the exact right length. The tempo of a loop depends on the length of the audio data, so for example a 4/4 bar loop at 120.0 BPM should have a length of exactly 2.0 seconds otherwise it will not be played back correctly.

Pages and parameters
To improve the user interface, some page names have changed (COMP to ACMP for accompaniment, NODE to INTF for interface), some parameters have moved to other pages (eg. new HPED page for hihat pedal), some parameter names have changed (eg. DRUM to FILE / FOLD) and those parameters which had values with units (like s or dB) are now without to improve the layout on the LCD.

Button function
By holding down MORE one can step backwards through parameter values with the buttons above the LCD.

Bug fix
When recording a cymbal choke by MIDI, it might not have functioned correctly when playing back. This is due to sequencer programs changing note on messages with velocity 0 to note off messages, now these are interpreted correctly.

Removed functions
The UNIT-PREF-LOAD parameter is removed, all kits are loaded when selecting them. The tap tempo function is removed.

KIT MODE

Single kit (KIT-PROG)
In addition to the 100 kits in the kit bank file, one can now use single kit files which can be located anywhere in the DrumIt Flash memory. They all appear alphabetically ordered after kit program 100. When pressing SAVE one can either save them to the same file (no rename) or copy them to any program location in the kit bank (with rename).

At this moment one can not copy kits from the kit bank to single kits because the DrumIt OS can currently only read / write existing files, not create new ones. (Note: to be able to select a single kit by MIDI program change, it has to be copied to a program in the kit bank first.)

Song pitch (KIT-PROG)
If a song is selected as accompaniment, there is a PITCH parameter which can be set between 0.50 and 1.0. This allows to practice along with a song at a lower speed.

Stop all (KIT-PROG)
By pressing MORE+STOP all running loops and the accompaniment will be stopped.

Kit name (KIT-PROG)
When pressing SAVE, the kit name is displayed with a blinking cursor under the first character. Turning CUR moves the cursor and clicking it deletes the current character. Turning KEY selects another character and clicking it inserts a space. When clicking directly after changing a character the cursor is moved first, which is convenient when writing successively. Holding MORE and turning CUR will shift the name (from the cursor position onwards) left or right.

Kit swap (KIT-PROG)
When pressing SAVE and selecting a different program, one can press SWAP to exchange the kit at the original location with the one at the new location.

File browser (KIT-DRUM)
To select sound files, one can switch between browsing files or folders by clicking the parameter dial. The parameter name is now switched accordingly between FILE or FOLD and the parameter value shows the ordinal number of each. (Note: this number is not associated with the file or folder itself, it just shows the order of them.)

Sound select (KIT-ENV)
With the SOUND parameter one can choose between different types of sound within a dsnd file. After selecting a new file (KIT-DRUM-FILE) all sound types are active with a default zone mapping. Selecting another combination will divide the sound types evenly over all zones. This allows for example to assign any of the bell, ride or crash sounds of a cymbal to the rim of a pad. (The reason for the rather symbolic selection tag is that the dsnd files currently do not have a name tag for the different sound types.)

Loop mode (KIT-ENV)
In case the chosen dsnd file is a loop file, one can use the SOUND parameter to select continuous mode with start / stop or one-shot with retrigger. The ! indicates a fixed volume independent of the trigger level. In loop mode the threshold is raised to -24 dB to prevent accidental triggering.

Mono mode (KIT-ENV)
When the VOICE parameter is Mono, the threshold is raised to -36 dB to prevent double triggers from restarting the sound.

KIT MODE (continued)

Eq on (KIT-VOL)
With the EQ parameter one can select if the drum channel passes through the equalizer or not. It is only available when the KIT-EQ-BUS parameter is set to Drum. (Note: the channel direct out does not pass through the equalizer.)

Equalizer (KIT-EQ)
There is a 3 band equalizer with individual settings for each kit. The LOW band (at 80 Hz) is shelving or low-cut, the MID band (between 100 Hz and 10 kHz) is peak or dip and the HIGH band (at 12 kHz) is shelving or high-cut. Press FREQ to set the mid band frequency from 125 Hz to 8 kHz in 1 octave steps or click the MID dial and turn to sweep the frequency from 100 Hz to 10 kHz in 1/3 octave steps. Each band provides +-12 dB gain. Press CURVE to reset the eq, press again to restore the previous settings.

Use the BUS parameter to select the bus on which the equalizer is active, either the Mix, Sub (mix) or Drum bus. The last one is a combination of all 15 drum channels, use the KIT-VOL-EQ parameter to select which ones.

Flanger (KIT-FX)
There's a flanger effect which can be chosen with the TYPE button on the FX page. The RATE can be set between 0.1 and 10 Hz and the DEPTH from 0 to 10.

Metronome bar (KIT-ACMP)
The metronome BAR parameter has a 1/4 bar which can be used when a single accent is sufficient.

Split wave (KIT-ACMP)
By clicking the FILE parameter, one can select the left chan as the music and the right chan as the click (or vice versa depending on the way the wave file is recorded). This enables having both music and click in the mix (eg. to the phones) and just the music on the submix (eg. to the line output).

Metronome tempo (KIT-ACMP, KIT-PROG)
The metronome TEMPO has 1 decimal place. Click the parameter dial to select between changing the value in units or tenths. The arrow indicates which part is being changed, after a second it changes back to a period.

UNIT MODE

Mixer fader (UNIT-MIX)
The selection of the 3 active faders (those controlled with the 3 parameter dials) is done with the FADER button or by clicking one of the parameter dials. This last option is convenient to directly select the 3 active faders without having to check the LCD for the current fader selection.

Trigger crosstalk (UNIT-TRIG)
To reduce crosstalk from pads on other channels, the XTALK parameter can be set to Off (no suppression), Low, Med or High (max suppression).

Cymbal triggers (UNIT-TRIG)
When the TYPE is Cym12/14, the GAIN parameter has an extra cup value selectable between Low, Medium or High. First turn GAIN so only hard hits on the bow or edge give full level on zone 4 or 8 (all LEVEL bars lit). Then click GAIN so only hard cup hits give full level on zone 1. (Note: only relatively hard cup hits will result in zone 1, otherwise they result in zone 4.)

There are 2 new cymbal trigger types, CyCup for cymbals with a cup switch and CyEdg for those with edge switch and choke.

Trigger curve (UNIT-TRIG)
The CURVE parameter has 9 settings. Neg2, Neg1, Norm, Pos1, Pos2, Lin1, Lin2, Max1, Max2. The neg and pos curves are improved and the new linear curves provide a higher trig level at low input while gradually going up to max.

Trigger types (UNIT-TRIG)
The possible values of the TYPE parameter are now channel dependent. Only certain combinations are possible. Rim channels 1 to 4 are selected with MORE+TOM1/2/3/4 and rim channel 5 with MORE+SNARE.

Channel		**Kick**	**Snare Tom1/2/3/4**	**Cymb1/2/3**	**HiHat**	**Rim1/2/3/4/5**
Trigger type	Zones					
Kick1/2	1	+	+	+	+	+
Pad8/10/12	1	+	+	+	+	+
Rim	1,8*	-	-	-	-	+
Cym12/14	1,4,8,9*	-	-	+	-	-
CyCup	1,4	-	-	+	-	-
CyEdg	4,8,9*	-	-	+	-	-
HiHat	4,8,9*	-	-	-	+	-
AcTr1/2/3	1	+	+	+	+	+

* If there is a separate sound on the rim channel, it will be triggered on zone 1.
* Zone 9 is the cymbal choke or hihat pedal chick / splash.

HiHat pedal (UNIT-HPED)
The hihat pedal parameters are now on a separate page.

CALIB to calibrate the hihat. Press it once and a closed hihat symbol will blink. Now loosen the hihat and let it rest on the hihat receiver and press CALIB, now an open hihat symbol will blink. Open the hihat to the position where the sound should just reach completely open and press CALIB once more. Finally fix it at a (possibly higher) open position.

MIDI which selects between continuous controller 1 or 4. The CC value range can be set from 0 when open to 127 when closed (arrow down) or from 0 when closed to 127 when open (arrow up). Normally MIDI pedal data is only sent just before a note on, selections with a ! indicate that pedal changes are sent continuously. Pedal down transmits control change and note on, the corresponding note off is send when the pedal moves up again. A short time between down and up results in a foot splash, a longer time results in a foot chick.

LEVEL shows the pedal trigger level which is on zone 9.

SENS to set the sensitivity +-6 dB. Adjust it so a firm foot down gives full trig level.

CURVE with 9 settings (see description above).

UNIT MODE (continued)

Trigger zones (UNIT-INTF)
The ZONES parameter shows the amount of zones for each channel. It corresponds to the amount of MIDI notes used. So if NOTE is A2 and ZONES is 3, the MIDI notes actually used are A2, A#2 and B2.

Submix (UNIT-OUT)
With the SUB parameter one can set the submix to any combination of 5 sources. Turn SUB to select a source and click to switch it in or out of the submix.

Source	Channels
drums	kick, snare, hihat, toms, cymbals and percussion
fx	effect
line	line input
wave	accompaniment wave type
metronome	accompaniment metronome type

Output 1+2 (UNIT-OUT)
OUT1+2 can now be set to provide the Mix, Sub(mix) or bus 1+2. The ! indicates a fixed output volume.

MIDI thru (UNIT-MIDI)
With the THRU parameter one can select if MIDI in data is passed on to MIDI out. This allows a MIDI master to control the DrumIt Five plus additional MIDI instruments connected to DrumIt Five. (Note: sysex messages will be passed on empty.)

Mixer view (UNIT-PREF)
The mixer view can be set with the MIXER parameter. Either Hor with 3 horizontal faders visible at the time and a large VU meter, or Ver with 9 vertical faders visible and a small VU meter below the MIX page name. When Ver! is selected the full fader names are shown for a second when changing fader focus to show the meaning of the single letter abbreviations.

Kit program (UNIT-PREF)
The INIT parameter has a KtPrg setting to initialize the kit program table (in case they were moved or swapped). This sets the order of all kits as in the DrumItInit.dkit file.

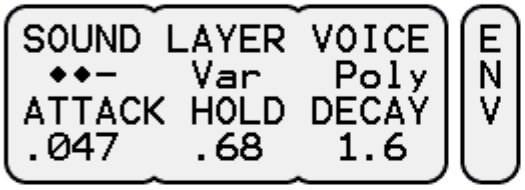
KIT

PROG

PROG

PROG

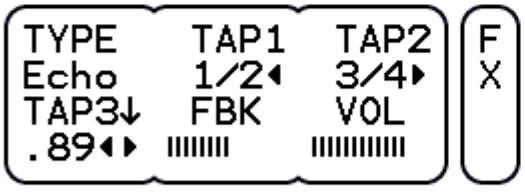
DRUM



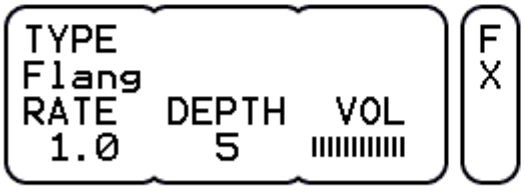
ENV

VOL

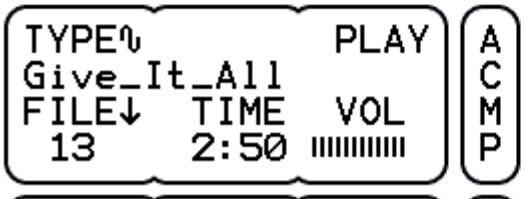
EQ



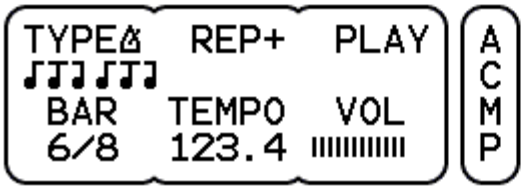
FX



FX

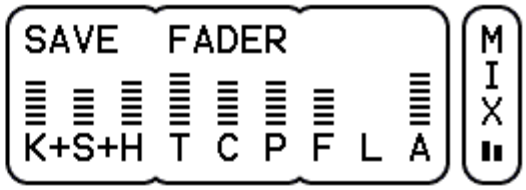


ACMP



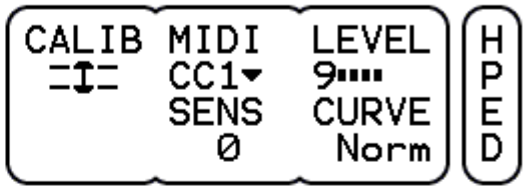
ACMP

UNIT

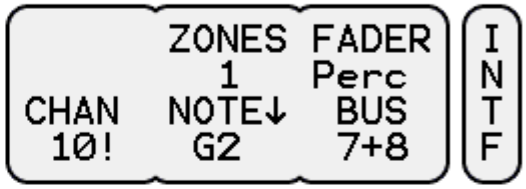


MIX

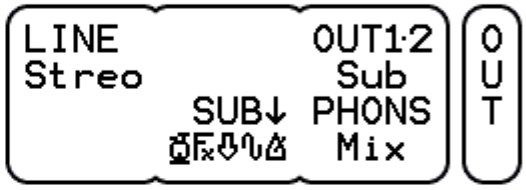
TRIG



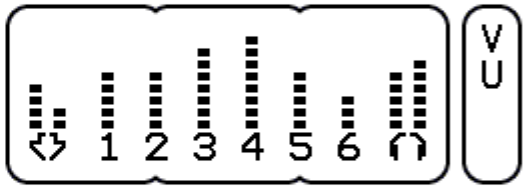
HPED



INTF

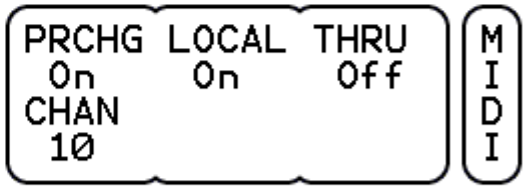


OUT



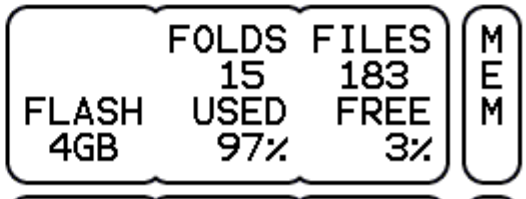
VU

METR

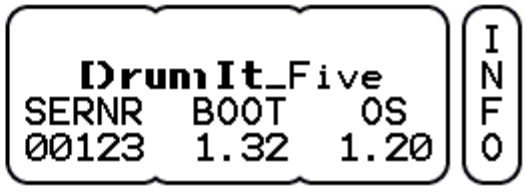


MIDI

PREF



MEM



INFO

Shaded pages have independent settings for each drum channel.